

## STATISTICAL METHODS FOR EVALUATING ASSOCIATIONS BETWEEN SELECTED FOAMED BITUMEN PARAMETERS

**A. Chomicz-Kowalska**

### *ABSTRACT*

The authors tested various bitumen intended for use in production of low temperature mineral-bitumen mixes with foamed binder. A few different binders were investigated, varying in hardness (from penetration grade PG 20 to PG 220) and type (neat, multigrade and FT synthetic wax modified). The evaluation covered the basic and rheological parameters of bitumen and characteristics of bitumen foam. After the first step in the analysis, which was to assess the parameters of bitumen before foaming, it was possible to distinguish three uniform groups of binders. The following step was to measure the characteristics of bitumen foam depending on foaming water content. The results helped evaluate the influence of the rheological parameters on the foaming ability of the bitumen. Mathematical models quantifying the relationships between parameters of foamed bitumen and the amount of foaming water were developed using statistical methods. The correlations were used to assign the binders for use in proper mineral-bitumen mix technologies according to valid recommendations.